CC-6 - Regional/State Cap and Trade Program, Carbon Tax, or Hybrid

Benefit/Cost of Reducing CO_2e:

The cost and benefits vary with the type of mechanism and are dependent on the scope of policy.

Assessment: **High Priority. Bin B. 13 out of 22 votes.**

Utah is participating in the development of a regional, market-based strategy, in conjunction with the Western Climate Initiative.

Cap and Trade. Cap and trade programs establish a cap on total emissions or an emissions reduction goal, specify caps for major sources and allocate emissions allowances to those sources, and then require sources to demonstrate each year that their actual emissions do not exceed their allowances. Sources that emit less than their allowances can sell excess allowances to other sources that exceed their allowances. Cap and trade programs face considerable challenges, such as how to establish the overall cap, how to allocate allowances to major sources, whether to give away or sell/auction allowances, how to monitor emissions and ensure compliance, and how to certify trades. U.S. EPA's acid rain program established under the 1990 Clean Air Act provides valuable lessons for the design of cap and trade programs.[11] The European Union's Emissions Trading System, established in 2005 to help prepare EU countries for complying with the Kyoto Protocol, is the world's largest GHG trading program.[12]

As indicated above, in May 2007, Utah became a member state of the Western Climate Initiative (WCI), joining Washington, Oregon, California, Arizona, and New Mexico and two Canadian Provinces. Members of the WCI have agreed to develop, within six months of the original charter date (Feb 2007), a regional GHG reduction target. By August 2008, The WCI plans to develop the design for a regional, market-based mechanism to achieve the target.

CO_2 Tax. A carbon tax is a tax placed on the consumption or production of carbon in any form. Proposals typically call for a tax based on fuel use or emissions or some other measure, such as the volume of smokestack emissions from power plants or the fossil fuel content of motor vehicle fuel. Carbon taxes are sometimes championed as an alternative to cap-and-trade programs, because they are simpler to design and implement, can be put in place more quickly, are easier to understand and consequently more likely to be accepted, more likely to lead to predictability in energy prices, can address more sectors of the economy, and create a revenue stream that can be used to reduce other

[11] http://www.epa.gov/airmarkets/cap-trade/index.html

[12] The Protocol requires that the EU as a whole reduce its GHG emissions from 1990 levels by 8 percent during the 2008-12 compliance period. The first phase of the program operates from 2005 through 2007. The core of the system is national allocation plans (NAPs), plans that set out each Member State's allocation of CO_2 emission allowances. NAPs set both the total of emission allocations available in each member state and the allocation made to each installation covered by the scheme; see http://ec.europa.eu/environment/climat/emission.htm.

taxes or fund energy efficiency and renewables. Critics point to the political difficulties associated with raising taxes, the experience with cap and trade programs like acid rain that have been widely viewed as successful, and the advantage of having a cap that, if accurately set, can ensure that environmental protection goals are achieved. Advocates of a carbon tax have created an organization

to promote the idea.[13] A carbon tax may be best pursued nationally or even internationally, but there has been some discussion of state and local governments embracing the idea. In November, 2006, for example, residents of Boulder, Colorado voted to approve what is apparently the nation's first carbon tax, based on the number of kilowatt-hours of electricity consumers use; the tax is estimated to add about $16/year to the average homeowner's bill and $46/year for businesses. Revenues, which are expected to reach $6.7 million by 2012, will be used to fund the city's climate action plan that includes energy efficiency, renewable sources, and reduced vehicle miles traveled.[14]

GHG offset/mitigation requirements for new power plants. A carbon offset requires a source to offset its carbon emissions by avoiding an equivalent amount of emissions elsewhere (either CO_2 or other GHGs) or by sequestering an equivalent amount of carbon. Companies that seek to be carbon neutral, for example, may be unable to completely eliminate emissions and choose to purchase offsets equal to whatever emissions they are unable to eliminate.[15] Under a 1997 law, Oregon requires new power plants to offset some of their CO_2 emissions; plants can meet that goal by making payments to the Climate Trust, a Portland NGO, which invests in greenhouse gas projects that avoid, displace, or sequester CO_2 emissions. Plants are required to ensure their net emissions remain 17 percent below the most efficient base-load gas plant operating in the US.[16]

Recommendation. We recommend that the state continue to work on a market-based strategy including considering the implications of regional cap and trade, carbon tax, product excise tax, and hybrid approaches. There should be an economic analysis of the costs and benefits associated with each of these policy options. A cap and trade program and a carbon tax are not mutually exclusive, and both could be implemented as part of an effort to reduce GHG emissions and achieve a particular target. They are discussed together here because policy discussions often address them at the same time. There are several issues to be explored, such as whether entities should be required to obtain independent verification of emissions. GHG trading programs will be more effective with more entities involved.

As a result of the Supreme Court's decision in April, CO_2 may be designated as a criteria pollutant, which may lead the EPA to regulate GHG from vehicles. Some states are supportive of said regulation. A federal policy on this issue may preempt state

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[13] See http://www.carbontax.org/

[14] Katie Kelley, "City Approves 'Carbon Tax' In Effort to Reduce Gas Emissions," *The New York Times* (November 18, 2006).

[15] Climate Biz, http://www.climatebiz.com/sections/backgrounder_detail.cfm?UseKeyword=Carbon%20Offsets

[16] Oregon Carbon Dioxide Emission Standards For New Energy Facilities, http://www.oregon.gov/ENERGY/SITING/docs/ccnewst.pdf.

regulation; as such any decision regarding this matter should take into consideration current federal proposals (see CC-8).

More information on the matter of vehicle CO_2 emissions can be found in the Transportation/Land Use sector recommendations and the Utah Energy Efficiency Strategy Report.